

REMARKS

The December 9, 2010, Supplemental Examiner's Answer has been received and carefully noted. The above amendments and the following remarks are being submitted as a full and complete response thereto. Claims 1-21 are pending in this application. By this Amendment, claims 1-2 and 7-8 are amended. Support for the amendment to claim 1 can be found in the Drawings at, for example, Fig. 1b. No new matter has been added. Reconsideration of the application is respectfully requested.

Claims 1-21 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. The amendments to claims 1-2 and 7-8 to remove the feature "spun" obviate the grounds for the rejection. Accordingly, Applicants submit that claims 1-21 satisfy the enablement requirement, and request withdrawal of the rejection of the claims under 35 U.S.C. §112, first paragraph.

Claims 1, 3 and 6 are rejected under 35 U.S.C. §102(b)/103(a) as being anticipated by, or obvious over, Yates et al. (U.S. Patent No. 4,171,626); and claims 1-21 are rejected under 35 U.S.C. § 103(a) as being obvious Nakajima (U.S. Patent No. 6,409,606) in view of Yates et al. Applicants respectfully traverse the rejections.

The current application claims a fiber reinforced plastic pipe reduced in thickness and increased in diameter by pultrusion process including a fiber bundle which fibers are aligned in a longitudinal direction, and a single circumferential reinforced fiber sheet provided at least either on an outer surface layer or on an inner surface layer thereof, as recited in amended claims 1 and 2, and similarly recited in amended claims 7 and 8.

Yates teaches a carbon reinforced composite tubular drive shaft wherein the fibrous reinforcement is positioned in a structural configuration capable of yielding improved service characteristics (Abstract). With respect to the carbon fiber and glass fiber reinforced drive shaft, Yates more particularly teaches “at least four bonded circumferentially disposed layers composed of appropriate fibrous reinforcement” (emphasis added; Abstract and Col. 7, line 50 to Col. 8, line 55; the Figure), and that such a configuration results in “a carbon fiber reinforced composite tubular drive shaft having improved service characteristics” (emphasis added; Col. 2, lines 26-28). Accordingly, Yates requires more than one circumferential reinforced fiber sheet to achieve the improved service characteristics, and thus fails to disclose, suggest or render obvious a single circumferential reinforced fiber sheet, as recited in amended claims 1-2 and 7-8.

In addition, Yates specifically teaches that “a carbon fiber reinforced composite tubular drive shaft having improved service characteristics comprises a plurality of bonded circumferentially disposed layers composed of fibrous reinforcement situated within a resinous matrix material, wherein the innermost layer comprises glass fibers disposed at an angle of from $\pm 30^\circ$ to $\pm 50^\circ$ to a line parallel to the longitudinal axis of the shaft, the outermost layer comprises glass fibers disposed at an angle of from $\pm 60^\circ$ to 90° to a line parallel to the longitudinal axis of the shaft, an intermediate layer comprises glass fibers disposed at an angle of from 0° to $\pm 15^\circ$ to a line parallel to the longitudinal axis of the shaft, and an intermediate layer comprises carbon fibers disposed at an angle of from 0° to $\pm 15^\circ$ to a line parallel to the longitudinal axis of the shaft” (emphasis

added; Col. 2, lines 25-42). Accordingly, Yates teaches that the “improved” performance is made possible by the plurality of layers, and thus precludes having a single circumferential reinforced fiber sheet, as recited in amended claims 1-2 and 7-8.

For at least a combination of the above reasons, amended claims 1-2 and 7-8 are patentable over Yates. Nakajima teaches a power transmission shaft to be used mainly in vehicles (Abstract), but at least because of Yates’ specifically discussed need for a plurality of bonded circumferentially disposed layers and preclusion of a single circumferential fiber sheet, fails to overcome Yates’ deficiencies in disclosing or rendering obvious the features of amended claims 1-2 and 7-8.

Accordingly, all the pending claims are patentable over all the applied references, and withdrawal of the rejections of the claims under 35 U.S.C. §102(b)/103(a) and 35 U.S.C. §103(a) is respectfully requested.

Should the Examiner determine that further action is necessary to place this application into better form for allowance, the Examiner is encouraged to telephone the undersigned representative at the number listed below.

In the event that this paper is not considered timely filed, Applicants respectfully petition for an appropriate extension of time. Any fees for such extension, together with any additional fees which may be due with respect to this paper, may be charged to Deposit Account No. 01-2300, making reference to attorney docket number **100725-00070**.

Respectfully submitted,



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